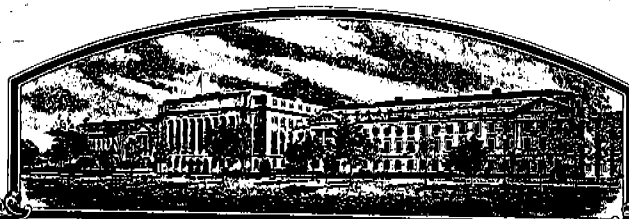


No.

7700049



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Oklahoma University
Agricultural Experiment Station

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *seventeen* YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. THE UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS SPECIFIED BY THE OWNER OF THE RIGHTS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

COTTON

'Westburn M'



In Testimony Whereof, I have hereunto set
my hand and caused the seal of the Plant
Variety Protection Office to be affixed
at the City of Washington
this 16th day of March in
the year of our Lord one thousand nine
hundred and seventy-eight

Attest:

Acting
Commissioner *[Signature]*
Plant Variety Protection Office
Grain Division
Agricultural Marketing Service

[Signature]
Secretary of Agriculture

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

INSTRUCTIONS: See Reverse.

1. VARIETY NAME OR TEMPORARY DESIGNATION Westburn M	2. KIND NAME Cotton	FOR OFFICIAL USE ONLY PVPO NUMBER 7700049	
3. GENUS AND SPECIES NAME Gossypium hirsutum L.	4. FAMILY NAME (Botanical) Malvaceae	FILING DATE 2-17-77	TIME 3:30 A.M. <input checked="" type="radio"/> P.M.
	5. DATE OF DETERMINATION March 11, 1976	FEE RECEIVED \$750.00	CHARGES
6. NAME OF APPLICANT(S) Oklahoma Agricultural Experiment Station	7. ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) Ag. Hall 139 Oklahoma State University Stillwater, Oklahoma 74074	8. TELEPHONE AREA CODE AND NUMBER (405)624-5398	
9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: (Corporation, partnership, association, etc.) State University		10. STATE OF INCORPORATION Oklahoma	11. DATE OF INCORPORATION 12-14-1891

12. Name and mailing address of applicant representative(s), if any, to serve in this application and receive all papers:

Dr. Ralph S. Matlock, Head
Department of Agronomy
Oklahoma State University
Stillwater, Oklahoma 74074

13. CHECK BOX BELOW FOR EACH ATTACHMENT SUBMITTED:

- ☒ 12A. Exhibit A, Origin and Breeding History of the Variety (See Section 52, P.L. 91-577)
- ☒ 12B. Exhibit B, Botanical Description of the Variety
- ☒ 12C. Exhibit C, Objective Description of the Variety
- ☒ 12D. Exhibit D, Data Indicative of Novelty
- ☒ 12E. Exhibit E, Statement of the Basis of Applicant's Ownership

The applicant declares that a viable sample of basic seed of this variety will be deposited upon request before issuance of a certificate and will be replenished periodically in accordance with such regulations as may be applicable. (See Section 52, P.L. 91-577).

14A. Does the applicant(s) specify that seed of this variety be sold by variety name only as a class of certified seed? (See Section 83(a), P.L. 91-577) (If "Yes," answer 14B and 14C below.) ☒ YES ☐ NO

14B. Does the applicant(s) specify that this variety be limited as to number of generations? ☒ YES ☐ NO

14C. If "Yes," to 14B, how many generations of production beyond breeder seed? Foundation and Certified—two generations

Applicant is informed that false representation herein can jeopardize protection and result in penalties.

The undersigned applicant(s) of this sexually-reproduced novel plant variety believes that the variety is distinct, uniform, and stable as required in Section 41 and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act (P.L. 91-577).

(DATE)

DEC 10 1977

(DATE)

(SIGNATURE OF APPLICANT)

(SIGNATURE OF APPLICANT)

Exhibit A

Origin and Breeding History of the Variety

'Westburn M' was derived from a breeding effort initiated in 1962 and carried through its initial stages by Drs. L. A. Brinkerhoff, Jay C. Murray, and R. E. Hunter. The final backcrosses, selections, replicated testing, and recommendation for release were made by Dr. Laval M. Verhalen and Mr. J. W. Simmons. Brinkerhoff also assisted during the latter period by inoculating segregating populations and selected experiments with a mixture of virulent races of bacterial blight. Dr. A. J. Kappelman, Jr., helped by making fusarium wilt comparisons in 1972 and 1975.

Westburn M was derived from a cross between [(Im2 X 22-3) F₃ 4-1] X 'Westburn' backcrossed to Westburn four times. The Im2 parent in the original cross was a blight-immune selection from L. S. Bird's 101-102B while 22-3 was a sister strain of 'Verden' crossed and then backcrossed three times to 'Lankart 57' with selection for blight resistance.

The progenies in the crosses with Westburn were selfed for one generation and then screened for their reactions to blight before each backcross. During the last two backcrosses, earliness, boll type, plant type, and fiber properties (especially micronaire) were also considered. One generation of selfing and two of pedigree selection between lines combined with mass selection within lines followed the last backcross. Initial multiplication was accomplished by selfing at Iguala, Mexico, and in the later stages by open pollination in Oklahoma at considerable isolation distances from other cotton.

The only genotypic variant observed during reproduction and multiplication of this variety was bacterial blight resistance. Resistant plants for the period 1970-1974 averaged 86.9% with a standard error of the mean of 2.8% when spaced plants in the four to six true-leaf stage were sprayed with a mixture of virulent races of the bacterial blight organism. Races 1, 2, 4, and 10 were used in these screenings. Resistant plants were calculated by subtracting susceptible plants from the total number of plants sprayed and scored. Susceptible plants were those with water-soaked lesions on their leaves typical of bacterial blight infestations.

The percentage of blight resistance is not changing in this variety. Blight resistance grades in 1975 averaged 82.1% which is well within a 95% confidence interval for the above data, i.e., C.I. = $86.9\% \pm 1.96(2.8\%) = 86.9\% \pm 5.5\% = 81.4\% \text{ to } 92.4\%$. No genetic variants (other than bacterial blight resistance) were observed in this variety during reproduction and multiplication.



OKLAHOMA STATE UNIVERSITY • STILLWATER

Department of Agronomy
405-624-6425

74074

March 10, 1977

Mr. Joseph J. Higgins, Examiner
Plant Variety Protection Office
USDA-Agric. Mktg. Serv., Grain Div.
National Agricultural Library
Beltsville, Maryland 20705

Dear Mr. Higgins:

Dr. Matlock, the Head of our Department, is unavailable due to illness; and in his absence, I've been asked to respond to your letter of March 2 (copy attached) about Cotton Application No. 7700049, 'Westburn M'.

For Exhibit A: We know 'Westburn M' is a stable variety because we've had it under seed increase for five years (1972 through 1976, inclusive); and during that time, no detectable shifts in gene frequencies have occurred. The variety at the end of the increase period looked the same as it did initially. The variety did not contain any morphological (i.e., genetic) variants in it for leaf type, bract type, boll type, glandlessness, nectariless, pollen or petal color, etc., at the beginning of the increase period nor did it contain any such variants at the end. The only variant we could detect in the population, the percentage of plants with bacterial blight resistance (see last two paragraphs of Exhibit A), did not change over the six year period (1970-1975) studied.

For Exhibit D: The summary novelty statement that distinguishes 'Westburn M' from all other cotton varieties is already included within our Exhibit D. What we failed to make clear in those comparisons is that 'Westburn M' resembles 'Westburn 70', genetically and phenotypically, more closely than it does any other variety. Supporting data for their similarities and differences (see first paragraph of Exhibit D) are included in the first table attached to the exhibit.

I hope that the above explanations are sufficient. If not, please send your inquiries for additional information to me; and I'll do my best to answer them. Dr. Matlock's office will continue to handle the fee payments, etc.

Sincerely yours,

Laval M. Verhalen

P.S. In your letter of March 2, you were going to enclose a copy of the new application form for cotton with its revised instructions, but that copy was unintentionally omitted. If you would please send me several copies of the form, it would be appreciated very much. *S.M.V.*

cc: Dr. Ralph S. Matlock, Head
Department of Agronomy

md
1430
1/11 10 11

INSTRUCTIONS

GENERAL: Send an original copy of the application, exhibits and \$50.00 fee to U.S. Dept. of Agriculture, Consumer and Marketing Service, Grain Division, Hyattsville, Maryland 20782. Retain one copy for your files. All items on the face of the form are self-explanatory unless noted below.

ITEM

- 5 Insert the date the applicant determined that he had a new variety.
- 12a First, give the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method. Second, give the details of subsequent stages of selection and multiplication. Third, indicate the type and frequency of variants during reproduction and multiplication and state how these variants may be identified. Fourth, provide evidence on stability.
- 12b First, give any special characteristics of the seed and of the plant as it passes through the seedling stage, flowering stage and the fruiting stage. Second, describe the mature plant and compare it with a similar commercial variety grown under the same conditions, and indicate the differences.
- 12c A supplemental form will be furnished by the PVPO to describe in detail a variety for each kind of seed.
- 12d Provide complete data indicative of novelty. Seed and plant specimens may be submitted and seeds submitted may be sterile. Where possible, include photographs of plant comparisons, chemical tests, etc.
- 12e Indicate whether applicant is the actual breeder, the employer of the breeder, the owner through purchase or inheritance, etc.

Exhibit B

Botanical Description of the Variety

'Westburn M' is a variety of upland cotton (Gossypium hirsutum L., fam. Malvaceae). It has green plant color, normal leaf shape with nectaries, normal bract shape, and is glanded.

Westburn M is intended to replace Westburn 70. Relative to that variety (see the first table attached to Exhibit D), Westburn M over all tests had 4.0% higher yield, 2.3% earlier maturity, 86.6% greater resistance to bacterial blight, 0.5 µg/inch higher micronaire, and 6.3% stronger fiber. Westburn M outyielded Westburn 70 by 6.9% in the dryland tests whereas the two varieties displayed equal yields under irrigation. The two varieties were essentially equal for picked and pulled lint percent, boll type, fiber length, uniformity index, and resistance to fusarium wilt. Westburn M may have slightly less tolerance to verticillium wilt--though the differences exhibited were not large enough to be of practical importance (as reflected in yield at the irrigated locations, where that disease is prevalent).

Westburn M, like Westburn 70, is primarily intended for production on dryland and under limited irrigation. It has yielded well under intensive irrigation, but the fact that it has only slight tolerance to verticillium wilt would allow the causal organism for that disease to build up in irrigated soil over time. Unlike its predecessor, Westburn M should have few problems with low micronaires or bacterial blight infestations. Because of its boll type, the variety does require stripper harvest.

OBJECTIVE DESCRIPTION OF VARIETY
COTTON (GOSSYPIMUM SPP.)

INSTRUCTIONS: See Reverse.

NAME OF APPLICANT(S) Oklahoma Agricultural Experiment Station	FOR OFFICIAL USE ONLY
ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) Ag. Hall 139 Oklahoma State University Stillwater, Oklahoma 74074	PVPO NUMBER 7700049 VARIETY NAME OR TEMPORARY DESIGNATION Westburn M

Place the appropriate number that describes the varietal character of this variety in the boxes below.
Place a zero in first box (e.g. or) when number is either 99 or less or 9 or less.

1. SPECIES:

 1 = GOSSYPIMUM HIRSUTUM 2 = GOSSYPIMUM BARBADENSE

2. AREA(S) OF ADAPTION (0 = Not Tested, 1 = Not Adapted, 2 = Adapted):

<input type="text" value="0"/> EASTERN	<input type="text" value="0"/> DELTA	<input type="text" value="0"/> CENTRAL	<input type="text" value="0"/> HIGH PLAINS	<input type="text" value="0"/> EL PASO AREA
<input type="text" value="0"/> WESTERN LOW HOT VALLEYS	<input type="text" value="0"/> SAN JOAQUIN	<input type="text" value="2"/> OTHER (Specify) Oklahoma		

3. MATURITY (50% Open Boll):

<input type="text" value="0"/> <input type="text" value="2"/> NO. OF DAYS EARLIER THAN	<input type="text" value="8"/>	}	1 = COKER 310	2 = DELTAPINE 16	3 = STONEVILLE 213
<input type="text" value="0"/> <input type="text" value="2"/> NO. OF DAYS LATER THAN	<input type="text" value="9"/>		4 = PAYMASTER 111	5 = ACALA 1517-70	6 = ACALA SJ-1
			7 = LANKART 57	8 = OTHER (Specify) Westburn 70	9 = Lockett BXL

4. PLANT HABIT:

<input type="text" value="2"/> 1 = SPREADING	2 = INTERMEDIATE	3 = COMPACT	<input type="text" value="3"/> 1 = FOLIAGE SPARSE	2 = DENSE
			3 = OTHER (Specify) intermediate	

5. PLANT HEIGHT:

<input type="text" value="0"/> <input type="text" value="0"/> CM. SHORTER THAN	<input type="text" value="8"/>	}	1 = COKER 310	2 = DELTAPINE 16	3 = STONEVILLE 213
<input type="text" value="0"/> <input type="text" value="6"/> CM. TALLER THAN	<input type="text" value="7"/>		4 = PAYMASTER 111	5 = ACALA 1517-70	6 = ACALA SJ-1
			7 = LANKART 57	8 = OTHER (Specify) Westburn 70	

6. MAIN STEM:

<input type="text" value="3"/> 1 = LAX	2 = ASCENDING	3 = ERECT	<input type="text" value="1"/> <input type="text" value="2"/> CM. TO FIRST FRUITING BRANCH	<input type="text" value="0"/> <input type="text" value="6"/> NO. OF NODES TO FIRST FRUITING BRANCH (from cotyledonary node)
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7. LEAF:

 CM. WIDTH OF WIDEST LEAVES AT MATURITY

8. LEAF PUBESCENCE:

<input type="text" value="5"/> 2 = SMOOTH LEAF (DELTAPINE SMOOTH LEAF)	1 = GLABROUS (HAIRS AS SPARSE AS D ₂ SMOOTH)	3 = PUBESCENT (STONEVILLE 213)
4 = HEAVY PUBESCENCE (H ₁ OR H ₂)	5 = OTHER (Specify) between 2 & 3 (closer to 2)	

9. LEAF COLOR:

<input type="text" value="3"/> 1 = VIRESCENT YELLOW	2 = LIGHT GREEN	3 = DARK GREEN (Acala-442)	4 = RED
5 = OTHER (Specify) _____			

10. LEAF TYPE:

<input type="text" value="1"/> 1 = NORMAL	2 = OKRA	3 = SUPER OKRA	4 = OTHER (Specify) _____
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11. FLOWER:

<input type="text" value="2"/> 1 = NECTARILESS	2 = NECTARIED
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<input type="text" value="1"/> Petals: 1 = CREAM	2 = YELLOW	<input type="text" value="1"/> Pollen: 1 = CREAM	2 = YELLOW
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12. FRUITING BRANCH TYPE:

<input type="text" value="3"/> 1 = CLUSTER	2 = SHORT	3 = NORMAL	<input type="text" value="1"/> 1 = DETERMINATE	2 = INDETERMINATE
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13. GOSSYPOL CONDITION:

<input type="text" value="3"/> 1 = GLANDLESS	2 = REDUCED GLANDS	3 = NORMAL GLANDS	<input type="text" value="1"/> 1 = NORMAL BUD GOSSYPOL	5
4 = OTHER (Specify) _____			2 = HIGH BUD GOSSYPOL	

14. SEEDS:

<input type="text" value="1"/> <input type="text" value="2"/> <input type="text" value="7"/> ± <input type="text" value="0"/> <input type="text" value="9"/> SEED INDEX (Fuzzy seed basis)	<input type="text" value="4"/> Seed Fuzz:	1 = SPARSE (GREGG 35)	2 = MODERATE (DPL-16)	slightly less than DPL-16
		3 = HEAVY (ACALA SJ-1)	4 = OTHER (Specify) _____	

Exhibit D

Data Indicative of Novelty

'Westburn M' is intended to replace 'Westburn 70'. Relative to that variety (see the first table attached hereto), Westburn M over all tests had 4.0% higher yield, 2.3% earlier maturity, 86.6% greater resistance to bacterial blight, 0.5 µg/inch higher micronaire, and 6.3% stronger fiber. Westburn M outyielded Westburn 70 by 6.9% in the dryland tests whereas the two varieties displayed equal yields under irrigation. The two varieties were essentially equal for picked and pulled lint percent, boll type, fiber length, uniformity index, and resistance to fusarium wilt. Westburn M may have slightly less tolerance to verticillium wilt--though the differences exhibited were not large enough to be of practical importance (as reflected in yield at the irrigated locations, where that disease is prevalent).

Westburn M, like Westburn 70, is primarily intended for production on dryland and under limited irrigation. It has yielded well under intensive irrigation, but the fact that it has only slight tolerance to verticillium wilt would allow the causal organism for that disease to build up in irrigated soil over time. Unlike its predecessor, Westburn M should have few problems with low micronaires or bacterial blight infestations. Because of its boll type, the variety does require stripper harvest. Westburn M is adapted to all areas of Oklahoma. Like Westburn 70, it should also do well on the Rolling Plains of Texas. Whether or not it will perform well on the Texas High Plains is unknown at this time.

Comparisons of Westburn M with all check varieties [included in eight or more of the 38 experiments over six years (1969-1974) in which Westburn M was tested] are also shown in the attached tables. 'Westburn' and 'Lankart 57' were included in the same subset of 28 experiments; 'Lockett 4789-A' in 19; 'Paymaster 101-B' in 16; 'Lankburn' in 12; 'Thorpe' in 8; and 'Lockett BXL', 'Lankart LX 571', and 'Stripper Cala-S' in the same subset of 8. Many comparisons with those varieties are possible with the data from the tables, but it should be noted that Westburn M on the average outyielded all of them from the 5.2% for Lockett BXL to the 32.3% for Stripper Cala-S.

Westburn M combines high yield in Oklahoma, the stormproof boll, resistance to fusarium wilt and bacterial blight, and high micronaire--a combination of characters not previously available.

From letter March 10, 1977: 'Westburn M' resembles 'Westburn 70', genetically and phenotypically, more closely than it does any other variety.

Dgt 4/25/77

7700049

Agronomic, Disease Resistance, and Fiber Property Comparisons Between 'Westburn M' and 'Westburn 70' Based on Replicated Field Trials in Oklahoma, 1970-1974.

Characteristics	No. Tests	Westburn M	Westburn 70
Lint yield (lbs./acre)	35	526.	506.
Lint yield on dryland	21	508.	475.
Lint yield under irrigation	14	553.	552.
Lint percent (picked)	35	36.2	35.4
(pulled)	35	26.2	25.5
Earliness (% first harvest)	13	69.1	66.8
Fusarium wilt rating*	2	24.3	23.7
Bacterial blight rating**	6	86.9	0.3
Verticillium wilt rating***	6	0.7	1.0
Boll type rating****	12	3.0	3.0
Fiber length (2.5% span, inches)	35	1.046	1.041
(32's)	35	33.5	33.3
Unif. index (50% span/2.5% span)	35	46.8	46.2
Micronaire (μ g/inch)	35	4.4	3.9
Fiber strength (1/8" gauge stel., gf/tex)	35	20.1	18.9
(0" gauge stel., gf/tex)	35	40.9	38.5
(P.S.I. in 1000's)	35	88.4	83.2

*Percent wilt as determined in the 1972 and 1975 Regional Cotton Fusarium Wilt Screening Test at Tallassee, Alabama, by A. J. Kappelman, Jr., for LMV-3 and LMV-5 in 1972 and for Okla. 1 and Okla. 2 in 1975, respectively. The susceptible check, 'Rowden', averaged 66.0% in 1972 and 52.0% wilt in 1975 in the area in which the Oklahoma material was tested. A repeat of this comparison in 1974 was discarded because of poor seed germination in one of the entries.

**Percent resistant and immune plants in the population when inoculated with a mixture of virulent races by L. A. Brinkerhoff.

***Visual symptoms assigned on a scale from 0 to 3 where 0 = a susceptible check variety, 1 = intermediate, 2 = 'Deltapine 16', and 3 = more tolerant than Deltapine 16.

****Visual grades where 0 = openboll, 1 = fairly loose but some storm resistance, 2 = storm resistant, and 3 = stormproof.

Exhibit E

Statement of the Basis of Applicant's Ownership

This application for a plant variety protection certificate for 'Westburn M' is made by the Oklahoma Agricultural Experiment Station, Ag. Hall 139, Oklahoma State University, Stillwater, Oklahoma 74074. The Director of the Okla. Agric. Expt. Sta. is Dr. Frank H. Baker. The applicant representative to serve for this application and to receive all papers is Dr. Ralph S. Matlock, Head, Department of Agronomy, Oklahoma State University, Stillwater, Oklahoma 74074.

Dr. L. A. Brinkerhoff and Dr. R. E. Hunter (former U.S.D.A. plant pathologists located at Oklahoma State University) carried this material through the first backcross. Dr. Jay C. Murray (former cotton breeder at Okla. State Univ.) accomplished the second backcross. The last two backcrosses, selections, replicated testing, seed multiplication, and recommendation for release were made by Dr. Laval M. Verhalen (present cotton breeder at Okla. State Univ.) and Mr. J. W. Simmons (former research assistant to the cotton breeder at Okla. State Univ.). Because three crosses have been made on the material since it was given to the cotton breeding program at Okla. State Univ. in 1965 (not to mention the tremendous amount of work done with the material since that time), the U.S.D.A. no longer has a claim on this variety. It's true that Dr. A. J. Kappelman, Jr. (a U.S.D.A. plant pathologist) made fusarium wilt comparisons between Westburn M, Westburn 70, and Westburn; but since he also makes such comparisons as a service to commercial, other state, and federal cotton breeders and geneticists, this service gives the U.S.D.A. no special claims on the variety. Dr. Brinkerhoff's (employed by Langston University, Langston, Oklahoma 73050 during the latter stages of this variety's development) inoculations were in a similar capacity and likewise give Langston Univ. no special claims on the variety.

In summary, three sequential crosses since 1965, four generations of selection, 38 replicated tests from 1969-1974, four generations of seed multiplication from 1972-1975, and the responsibility for standing behind the release of the variety establish the ownership of Westburn M by the Oklahoma Agricultural Experiment Station.

FORM GR-470-8 (REVERSE)

15. BOLLS:

<input type="text" value="2"/> Locules:	1 = 3-4 2 = 4-5 (almost all 5's)	<input type="text" value="3"/> <input type="text" value="7"/> NO. SEEDS PER BOLL	<input type="text" value="3"/> <input type="text" value="6"/> <input type="text" value="2"/> (Picked) LINT PERCENT	<input type="text" value="3"/> <input type="text" value="5"/> MM. DIAMETER
<input type="text" value="2"/> Pitted:	1 = NONE 2 = FINELY 3 = COARSELY	<input type="text" value="7"/> <input type="text" value="2"/> <input type="text" value="2"/> GRAMS SEED COTTON PER BOLL	<input type="text" value="2"/> Breadth:	1 = BROADER AT BASE 2 = BROADER AT MIDDLE
<input type="text" value="1"/> Type:	1 = STORMPROOF (WESTBURN 70) 2 = STORM RESISTANT (LANKART 57) 3 = OPEN (DELTAPINE 16)	<input type="text" value="3"/> Shape:	1 = LENGTH < WIDTH 2 = LENGTH = WIDTH 3 = LENGTH > WIDTH	

16. BRACTEOLLES:

<input type="text" value="3"/> Breadth:	1 = LENGTH < WIDTH 2 = LENGTH = WIDTH 3 = LENGTH > WIDTH
<input type="text" value="2"/> Teeth:	1 = FINE 2 = COURSE
<input type="text" value="4"/> Teeth:	1 = 3-4 2 = 5-7 3 = 8-10 4 = OTHER (Specify) 8-16 ($\bar{x} = 11$)

17. YIELD: Compared to—

<input type="text" value="—"/> <input type="text" value="—"/> <input type="text" value="—"/> PERCENT LESS THAN	<input type="text" value="—"/> } 1 = COKER 310 2 = DELTAPINE 16 3 = STONEVILLE 213
<input type="text" value="2"/> <input type="text" value="8"/> <input type="text" value="7"/> PERCENT MORE THAN	<input type="text" value="7"/> } 4 = PAYMASTER 111 5 = ACALA 1517-70 6 = ACALA SJ-1 7 = LANKART 57

18. FIBER LENGTH (Complete one or more of the following and give the means):

<input type="text" value="0"/> <input type="text" value="4"/> <input type="text" value="9"/> SPAN LENGTH 50%	<input type="text" value="1"/> <input type="text" value="0"/> <input type="text" value="5"/> SPAN LENGTH 2.5%	<input type="text" value="—"/> <input type="text" value="—"/> <input type="text" value="—"/> U.H.M. LENGTH
<input type="text" value="—"/> <input type="text" value="—"/> <input type="text" value="—"/> MEAN LENGTH	<input type="text" value="3"/> <input type="text" value="3"/> STAPLE LENGTH 32nd INCHES	
<input type="text" value="—"/> <input type="text" value="—"/> UNIFORMITY RATIO (MEAN/U.H.M.)	<input type="text" value="4"/> <input type="text" value="7"/> UNIFORMITY INDEX (50% SPAN/2.5% SPAN)	

19. FIBER STRENGTH AND ELONGATION:

<input type="text" value="0"/> <input type="text" value="8"/> <input type="text" value="8"/> 1,000 P.S.I.	<input type="text" value="—"/> <input type="text" value="—"/> <input type="text" value="—"/> ELONGATION E_1	<input type="text" value="4"/> <input type="text" value="0"/> <input type="text" value="9"/> $\frac{E}{T}$ STYLOMETER T_0
<input type="text" value="4"/> <input type="text" value="4"/> <input type="text" value="1"/> MICRONAIRE READING	<input type="text" value="1"/> <input type="text" value="1"/> <input type="text" value="9"/> YARN STRENGTH (Give test method) Yarn Tenacity, cN/tex	<input type="text" value="2"/> <input type="text" value="0"/> <input type="text" value="1"/> $\frac{E}{T}$ STYLOMETER T_0

20. DISEASE: (0 = Not Tested, 1 = Susceptible, 2 = Resistant) 3 = Tolerant

<input type="text" value="3"/> VERTICILLIUM WILT	<input type="text" value="2"/> FUSARIUM WILT	<input type="text" value="0"/> ROOT KNOT NEMATODE	<input type="text" value="2"/> BACTERIAL BLIGHT (Race 2)
<input type="text" value="2"/> BACTERIAL BLIGHT (Race 2)	<input type="text" value="0"/> ASCOCHYTA BLIGHT	<input type="text" value="0"/> PHYMATOTRICHUM ROOT ROT	<input type="text" value="0"/> RHIZOCTONIA
<input type="text" value="0"/> ANTHRACNOSE	<input type="text" value="0"/> RUST	<input type="text" value="0"/> OTHER (Specify)	

21. INSECT: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

<input type="text" value="0"/> BOLL WEEVIL	<input type="text" value="0"/> APHID	<input type="text" value="0"/> FLEAHOPPER	<input type="text" value="0"/> LEAFWORM
<input type="text" value="0"/> FALL ARMYWORM	<input type="text" value="0"/> GRASSHOPPER	<input type="text" value="0"/> LYGUS	<input type="text" value="0"/> PINK BOLLWORM
<input type="text" value="0"/> STINKBUG	<input type="text" value="0"/> THRIP	<input type="text" value="0"/> CUTWORM	<input type="text" value="0"/> SPIDERMITE
<input type="text" value="0"/> OTHER (Specify)			

REFERENCES: The following publications may be used as a reference aid for the standardization of terms and procedures for completing this form:

- (1) Brown, Harry B., and J. O. Ware, 1958, Cotton, McGraw-Hill Book Company, Inc., New York.
- (2) Lewis, C. F., and H. H. Ramey, Jr., 1971, 1970 Regional Cotton Variety Tests, ARS 34-130, United States Department of Agriculture.

COLORS: Nickerson's or any recognized color fan may be used to determine flower color of the described variety.

PAGE	SERIAL	A	B	COBOL STATEMENT

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
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